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ABSTRACT

This paper explores the difficulties of extending good, workable educational ideas to entire schools or districts. Two restructured schools that participated in a 4-year collaborative project that involved multi-age primary classrooms, inclusion of special-needs students in regular classrooms, and increasing specificity in assessing student learning. These projects met requirements for systemic change: considering multiple elements, school culture, long-term results, humanistic orientation, and multiple correlates. Teachers in both schools made starting and finishing times more flexible, adapted curriculum and instructional delivery to diverse students' needs, created new collaborative structures for special and regular education teachers, and learned and applied more systematic and curriculum-oriented student learning-assessment tools. Failure to extend successes to intermediate levels may be due to intermediate teachers' inadequate time investment and training, professional jealousy concerning resource allocation, the perception that primary and intermediate elementary students are essentially different, and principals' laissez-faire approach to program integration. The schools' inability to take the primary teachers' paradigm shift to scale is a reflection of powerful societal norms about the nature of schooling. (Contains 50 references.) (MLH)

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Taking school reform successes to "scale": Governance and leadership issues in two restructuring elementary buildings*

Paul Goldman & Gerald Tindal, University of Oregon

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Introduction & Conceptual Background

How do schools take good ideas and practices that have worked in their buildings--that is, those that sustain student learning and have the support of teachers and staff-- and make them school-wide or even district-wide? This study reports on two schools--Candlelight and City View--that participated in a four year collaborative project focused on multi-age primary classrooms, inclusion of special needs students in regular classrooms, and increasing specificity in assessing student learning. These projects, and the schools' achievement in implementing them, met requirements for systemic change: (a) multiple elements rather than single variables, (b) school culture rather than just classroom or student, (c) long-term rather than short-term results, (d) humanistic rather than technological orientation, and (e) multiple correlates/interactive effects rather than causes and effects (Katz, 1991) . More specifically, teachers in both schools changed and made more flexible starting and finishing times, changed curriculum and instructional delivery to meet the demands of multi-age and special needs learners, created new collaborative structures that included both regular and special education teachers, and learned and applied more systematic and curriculum-oriented student learning assessment tools. However, at one school systemic change stopped at the second grade; at the other, even with more articulation between grade levels, the creativity and achievement were not carried through to intermediate students. Our question is <u>why</u>?

School restructuring research in the 1990s has emphasized the extent to which the school building is the most viable site for educational change (Fullan, 1991; Louis and Miles 1990; Teddlie and Stringfield 1993; Fullan and Miles 1992; Murphy and Hallinger 1993). In general, schools are both cultures and social systems. No school can be closed off from external influences, and every school is influenced, sometimes dominated, by formal bureaucratic systems that can be manipulated but only rarely ignored. At the same time, each school building has a life of its own fed by everyday interaction and interdependence. It has a human scale and an unavoidable accountability of personal relationships. More significantly, teachers in schools sometimes display the special commitment and shared energy that makes change happen. More frequently, this phenomenon exists for sub-groups in the school; when it does, it creates school wide dynamics that typically accelerate or derail change. Moving from small-scale to large-scale changes is often more upsetting to the social system of a school than the small-scale change itself. As change broadens, more and more individuals networks, some of them resistant, are involved. Moreover, tolerable inconsistencies of subsystems become intolerable contradictions of systems. For this reason, most educational change historically has been incremental (Pogrow, 1996).

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The research and theoretical literature--on school reform, school-site decision making, teacher collaboration, school leadership--provides ample documentation of factors correlating with successful change: teacher empowerment to carry out initiatives they consider critical (Murphy & Beck, 1995; Reitzug & Capper, 1996); teacher collaboration rooted in emerging conceptions of schools as communities (Louis, et al., 1995; Sergiovanni, 1994) and professionals as collegial actors as well as deliverers of knowledge (Hargreaves, 1994); and energetic, vision-oriented principal leadership (Deal & Peterson, 1994; Murphy & Louis, 1994; Prestine, 1993). Although the principals were supportive rather than activist, both buildings otherwise fit the profile of successfully restructuring schools, but they could not take their accomplishments to scale.

We suggest that what happens in restructuring--the very things that make restructuring successful--frequently, perhaps necessarily, contains a set internal contradictions that makes it difficult to extend the scope to new participants. This phenomenon is most visible in bottom-up restructuring, as we have seen in this research, but occurs in top-down efforts as well (Pogrow, 1996). Organizational theory and research, especially discourse on organizational cultures/communities, institutionalism, and coordination (loose and tight coupling) provide significant insights.

Context and Methods

Candlelight Elementary is a K-5 building in a 5,000 student district. Most of its 500 students come from white working class families in which wage earners, if they are employed, typically work in nearby light industry. The school experienced a stormy period in the late 1980s as the initiatives and personal style of a reform-minded principal divided both staff and parents. A new principal provided a calmer atmosphere. In the early 1990s, the staff decided to create multi-age K/1 and 2/3 classrooms and in 1993 entered into the Departure partnership with the university and, at about the same time, Candlelight successfully applied for entry into one of the major national school restructuring consortia. Despite these efforts, Candlelight is a typical lower middle income school with little money, too many difficult student learning problems, and state assessment scores that don't reflect the quality of instruction at the school.

Candlelight teachers supported the principle of developmentally appropriate education and attempt to meet the unique learning needs of all their pupils. They committed themselves to increased integration of children with disabilities into regular classes. As experienced teachers, most had a fairly wide repertoire of instructional skills, though most of the staff (but not the special education teachers) favored whole-language approaches for teaching primary reading. Knowing that the changes to multi-age classes would require them to develop new curriculum and instruction, Candlelight modified its schedule to facilitate collaborative planning. On Wednesdays, students finished before lunch, giving teachers several hours of duty-free meeting time each week. The principal did not schedule staff meetings during this time block. After the 1993-94 school year, Candlelight discontinued

We focus here primarily on the Candlelight grade 2-3 block. The K-1 multi-age block had special problems, lasting only a single year before reverting to traditional

kindergarten and first grade classes. The team's problems were structural and outside the school's and the teachers' control. Because of staff reductions and position shuffling following district-wide budget cuts in the wake of Oregon's Measure 5 property tax limitation measure, several team members were new at their grade assignments and had little or no primary teaching experience. Moreover, most of them had not participated in research and planning for the multi-age block.

City View Elementary is a K-5 urban building with 300 children from poor, working class, and middle class families, including about 40 who do not speak English at home. The school has had a relatively high transience rate and has had trouble attracting and retaining the middle class students in its cachement area (the district as an open-enrollment policy). The staff is experienced, cohesive, and teachers and the principal are highly regarded among district colleagues.

The five City View primary faculty developed a mixed-age homeroom structure gradually, beginning in 1989 with weekly "rainbow" activities, in which they mixed up their children and rotated them through five projects with a common theme. A "platooning" system began in 1992-93, with heterogeneously grouped homerooms for most subjects and ability grouping for math and reading/language. For reading and language the teachers group their students by ability, and many children do not take reading with their homeroom teacher. They did the same in math for the first year, but subsequently decided to retain math instruction in the homeroom.

City View teachers were passionately committed to "developmentally appropriate" learning environments that integrate special services into the regular instructional environment and that require interdependence among colleagues with diverse skills. They felt especially strongly that small group instruction would be necessary for the multi-age primary program to be successful. Accordingly, the staff stretched their teaching contact time, adding 45 extra minutes daily so they provide small group instruction for "early birds" (8-8:45) and "late birds" (2-2:45).

Candlelight and City View both initiated their multi-age projects in the early 1990s, and subsequently joined the University in Project Departure in 1993. Departure was a federally funded four-year (1993-1997) program to help schools build developmentally-based educational services that incorporated multi-age classrooms and inclusion of special needs learners. The university partner provided classes, in-services, and direct consultant services in curriculum-based measurement, consultation skills, team-building, and organizational development. Candlelight staff were especially interested in curriculum-based measurement, and the university partner spent hundreds of person hours annually doing training, assisting in data collection, and helping staff analyze and interpret student data from fall, 1993 to the present. The university partner's efforts at City View were substantial, but less extensive than at Candlelight.

The research team began data collection at both schools in October 1993. Each year, every primary teacher and the specialists who support them was interviewed at least once, and often twice. The principal, other teachers, and central office

administrators were also interviewed. Several focus group interviews took place at each school. Each classroom was observed at least briefly several times annually. During the 45 month (to date) research period, over 60 meetings have been observed in each school. In addition, university project staff who delivered training and consultation services recorded their activities and brought insights and information to research team meetings.

The data analysis process proceeded along two tracks. One team attempted to develop student performance indicators tied to teacher curriculum, and with the help of teachers, collected, analyzed, and interpreted these data. The same data could be useful for teachers in adapting curriculum to measured student progress and useful to researchers for tracking longer-term student assessment trends. A second team attacked the overwhelming volume of interview and observational data, initially using the grounded theory procedures described by Strauss and Corbin (1990). Open coding focused us on teacher behaviors and beliefs, that is how they attempted to implement the new instructional priorities and what they thought about and discussed in the process. Axial coding integrated these phenomena into a broader story line in which these more-or-less observable phenomena continually crossed with one another and with the context provided by Oregon's broader school reform efforts. As we begin to identify emergent themes, the two teams interacted to share data and impressions, and the data analysis and interpretation process became more recursive. During 1996-97, we began systematically to share data and interpretations with teachers, feeding their reactions and insights into our understanding of the life of the school.

What happened at Candlelight and City View

(1) Paradigm shift

In developing their new instructional programs, teachers at the schools attempted to address vexing issues documented in the literature about problems facing special education students and other slow learners in traditional elementary classrooms. They read extensively and attempted to visit schools that had chosen multi-age classroom structures. There is considerable research support for their choices, although research findings in this area have not been consistent or necessarily completely consistent. Three articles (none of which particularly influenced the teachers) put an academic gloss on the issues they cared about. Baker and Zigmond (1990) reported that children with learning disabilities in the academic mainstream experienced largely undifferentiated, whole-class, and text-driven learning environments. Moreover, there is substantial research evidence on the modest amount of active reading instruction and academic learning time afforded low-achieving students (Allington & McGill-Franzen, 1989). Such undifferentiated instruction or assignments, and lack of sufficient learning opportunities to "catch-up" may require such educational reforms as the nongraded, multi-age primary to provide adaptable and inclusive organizational and instructional learning environments. A meta-analysis by Gutierrez and Slavin (1992) suggests that nongraded organization may positively impact student achievement if cross-age grouping is used to allow teachers to provide more direct instruction to students.

City View and Candlelight, schools utilized mixed-age primary classrooms as levers to restructure their curriculum and to provide adaptive, inclusive learning environment for each of their students. The staff's sought to harmonize their commitments to the integration of handicapped learners with inclusive practices that would adapt curriculum to individual needs and involve all students in mainstream school life.

Both schools' primary teachers wished to implement "developmentally appropriate" rather than traditional age-graded instructional strategies. They created classroom formats they thought would improve their ability to individualize instruction and take advantage of the synergy that could exist when they taught children of different ages in a single classroom. From the very beginning, teachers in these schools generated a rationale for the new program that is commonly expressed by advocates of mixed-age grouping: flexible and individualized student pacing, child-centered not curriculum-centered instruction, continuity of instruction over a period of years, qualitative improvements in peer learning and peer relations, recognition of diversity (Gaustad, 1992; Miller, 1994). They hoped that mixed-age classrooms would facilitate "relationship building and promote a family-like climate that bonds teachers, parents, and students together into a community of learners (Miller, 1994, p. 91).

The school staffs perceived these changes as fundamental and treated them as a significant paradigm shift: they believed that their curriculum could be and should be revamped; they also believed that using diversity as an organizing principle for instruction was a fresh idea. They were determined to break new ground and to break out of what Louis and Kruse (1995) call the "schoolness" of their buildings. They expressed their concerns broadly and frequently philosophical terms. They wanted to create learning communities that transformed diversity into a school strength rather than treating it as a liability (Goldman & Tindal, 1996). Only then would students who were different be full citizens of the building (Horrocks, 1993). Their thinking is summed up nicely in Cohen and Lotan's (1997) description of "the equitable classroom:"

> In an equitable classroom teachers and students view each student as capable of learning both basic skills and high level concepts. All students have equal access to challenging learning materials; the teacher does not deprive certain students of tasks demanding higher order thinking because they are not ready. . . Finally, the achievement of students does not vary widely between the academically stronger and weaker students. While the more successful students continue to do well, the less successful students are much more closely clustered around the mean achievement of the classroom rather than trailing far out on the failing end of the distribution. (p. 4)

Their attitudes towards reform became self-fulfilling: the belief that they had changed, were changing, opened them to new ideas; their belief in their own success bred new changes.

(2) Grouping and re-grouping students

The practice of intentionally and instrumentally grouping students for instruction became an important organizing principle for both schools as the multi-age programs evolved. In one sense the ideas were neither new nor novel. After all, most American elementary students are "grouped" in graded classrooms, and most teachers divide their pupils into groups, usually by ability, for some, if not most, instructional purposes. However, traditional practice has been driven by efficiency and by the historic logic of a rational division of labor in which like activities and like people are segregated to the fullest feasible extent. In addition to whatever outcomes might ensue, this logic had provided classroom structures that most teachers have believed best utilizes their time and energy. Both City View and Candlelight staffs moved to multi-age instructional organization because they could not accept that logic. They believed homogeneous grouping defeated the purpose of developmentally appropriate instruction that could better serve each student and that heterogeneous grouping provided educational opportunities that helped students grow socially and emotionally as well as academically. They implicitly defined their professional challenge as creating an educational program based on inclusion (broadly conceived) without sacrificing the educational and time benefits of homogeneous grouping. Each school's specific approach was distinctive, but teachers at both schools frequently conveyed the sense they were walking a high wire.

City View's grouping strategy was to assign incoming first grade students to "homeroom" teachers in a fashion that would, to the extent possible, create maximum diversity of pupil "ability" in each classroom. Kindergarten teachers provided input as did the Chapter 1 teacher who did initial screening of each child. Because of the teachers' commitment to Direct Instruction for basic skills, however, they believed that they should ability group for language arts and math instruction. Their screening allowed them to create mixed age but homogeneously abled groups (two per primary teacher) who were reassigned to different teachers for reading and language arts. The homogeneous reading groups allowed each teacher to exploit individual instructional skills and specialties. One teacher, for instance, was particularly adept at working with slow readers, another was best with students who learned reading more easily. The teachers' individual strengths, combined with their ability to work collaboratively, supported their grouping strategy:

> I feel teachers should have a role in deciding what materials to use, how to use them , how to work with their peer group, and most importantly make the decisions on where to place children in the picture that best meets their needs. I'm talking about making the decision as to placing the child where their needs will be met and planning the program around the child rather than having to fit the child to the program. I also feel that the decision should not be made by individual teachers but by a team such as the primary or intermediate teams at the building levels because no one teacher can know a child completely enough to make that major of a decision alone.

The split start allowed teachers to work with half their class for reading early in the morning and with the other half at the end of the day. Both groups met together for a "second shot" in mid or late morning. As one teacher put it,

> the curriculum and delivery of instruction was restructured to that the mornings were dedicated to flexible groupings to meet individual differences in basic skills. The composition of these groups was to remain "fluid" throughout the child's experience in the primary grades.

The teaching staff's ability to make this kind of adaptation in grouping structure contributed to their sense of individual and collective professional efficacy. As the program evolved, they regularly reviewed student progress so they could move students from reading group to reading group if they were learning more quickly, or more slowly, than the group as a whole. While there were a number of issues, primarily spin-offs from continual funding declines, that caused teachers to question what they were doing, over the course of the five years we observed them, they consistently believed that the combination of heterogeneous "homerooms" and homogeneous reading groups optimized their students' learning and development.

Candlelight's strategy differed in both grouping structure and instructional approach. In analyzing what happened at Candlelight, we will not discuss the discontinued one-year experiment with mixed-age K-1 classes. Candlelight staff believe, probably accurately, that the failure of the K-1 program resulted from a series of uncontrollable external factors, notably staff turnover and reductions-in-force. The K-1 team consisted of teachers who had not participated in the multi-age planning, who had not worked together, and some of whom had no experience, or no recent experience, teaching primary-age children. They were unable to build an effective collaborative team capable of implementing the complex changes required by the new program (Goldman and Tindal, 1996). In retrospect, however, we also wonder whether the K-1 configuration, with its special problems of introducing kindergartners to school life and midday shift from large to small class size, simply didn't allow enough emphasis on the reading instruction that has to be the core of any first grade curriculum.

Candlelight's 2-3 block faced different issues than City View's 1-2. First, most second graders have some reading skills, and of course all have had at least a year of reading instruction as first graders. Second, instructional requirements of the whole language reading instruction favored by Candlelight teachers depended less on homogeneous grouping than did City View's preference for direct instruction. Third, Candlelight teachers were firm believers not only in heterogeneous grouping but in cooperative learning.

The importance these teachers attach to group heterogeneity and cooperation cannot be overestimated. The Candlelight teachers had a very strong philosophical commitment to their grouping strategies, in ways that are similar to Cohen and Lotan's (1997) rationale for the "equitable classroom." A typical comment, similar to those we heard throughout the study, was "my kids feel good about themselves. I say you learn better in a smaller group." Another teacher explained the shared philosophy in greater detail

> The non-graded primary is based on working in groups rather than working individually or sitting in rows and just being interactive with the teacher. There's a lot of cooperative learning. There's a lot of peer tutoring. Right now we have our second and third together and we try to take the kids developmentally from their point and move them forward and not compare them to each other but let them help each other. That's really good for the younger kids because they learn to accept peer as helpers instead of just teachers and that's good for the older kids because they take on some leadership roles that they may not have gotten, for example, if they were just in the third grade.

Nevertheless, beneath the surface at least some teachers expressed doubts about the multi-age structure and the philosophy of inclusive grouping. One Candlelight teacher was especially worried about math which was

> a thorn in my side because the kids are at so many different levels, and I don't want to hold anybody back, but I don't want to leave these kids in the dirt that are struggling. I am still wondering if we need to re-group for math. That goes against the whole philosophy of non-graded and it starts putting kids back in groups and labeling and it might just squish everybody's balloon.

For Candlelight teachers, grouping (especially for reading) was evidently a last resort while at City View it was an affirmative strategy. In addition to being compatible with the City View teachers' leaning toward direct instruction as the preferred teaching method for reading, their grouping practices also reinforced their ability to saturate their weaker readers, whether or not on IEPs, with intensive small group instruction at both ends of the school day.

(3) Inclusion of learners with special needs into the regular program

The two schools' approaches to grouping flowed naturally into their management of special needs students and how these children were included into the regular life of the classroom while at the same time getting the focused additional services they needed. At City View a relatively high proportion of special education services were delivered directly to kids in the classroom. Two factors facilitated this inclusionist approach. First, the teachers built a very coherent primary level professional community in which teachers felt comfortable having specialists in their classrooms, and staff used proximity to exchange information about student needs and student progress. Second, the primary-wide ability grouping of students in reading created a sense that academic performance and academic needs were more of a continuum than a sharp divide between regular and special education. What distinguishes service provision is intensive instruction in groups of 3 to 5 rather than 10 to 12. City View's special education teacher, in describing her mornings, gives some texture to these generalities:

> I have approximately 10 first- and second-graders. . . Four of the second graders receive reading in a pull-out program first thing in the morning. They come to the . . . resource room, and it's a direct instruction program,

> Reading Mastery II. Then I go into one of the primary classes and I teach a group of first graders with the direct instruction, and that has a little girl in it who has orthopedic impairments and learning disability. She's third grade age, but this is her first real school experience so she's with first graders for reading. . . Then I have a group of 12 or 13 mixed "learning disabled" and "regular" second-graders. That's during a 50 minute language arts block. . . That includes those four kids that I see first thing in the morning. Instead of pulling them out, I go into the room and teach the bigger group.

City View used learning groups strategically in ways that supported delivery of special education. The special educators argued that the being able to "find" groups of needy kids in regular classrooms facilitated their work while at the same time supporting inclusion by linking them more closely to activities in the regular classrooms.

> What I really think has benefited kids was this regrouping. Because we've been able to have special ed kids be part of it and sometimes we, and look, I have been able to teach in the rooms and. . . this has never happened before.

However, inclusion and the reading grouping strategies have also had the effect of creating some very fundamental changes in how teachers see their relationship to students:

> When I reflect back on the days when I had a self-contained classroom, and I felt like I was in complete control, complete control of the program and curriculum and the placing and the speed and the outcome and knew exactly where every kid was at every moment of the time. In order to get it done at the mixed age, I've had to relinquish some of that control, and the blessing is to work in a team, so we do a lot of planning, team planning, so which is, that's on the positive side of it is that we can get a lot done because we plan together as a team.

The sense of connectedness to other primary teachers made giving up control less difficult. More significantly, the two year cycle of the multi-age classroom where children stay with their "homeroom" teacher for both first and second grades gave teachers an intimate knowledge of at least their second graders. The longer time frame supports inclusion: "having [the] same group two years . . . has helped inclusion goals. Respect among children is high. The students are patient with students. . ." We saw this respect and patience in our classroom observations. Transitions, and at City View they occurred very frequently, were seamless. Students moved classmates, carried pointing boards or Braille readers, facilitated computer work and so on.

The City View staff were especially careful about making sure their grouping would not result in invidious labeling or stigmatizing learners with special needs or other children in the lowest groups. They attempted to create an environment where primary children were regrouped and moved between classrooms and teachers several times daily and created an expectation this movement was a natural part of schools.

Their rationale was that because of this frequent movement, extra attention and an adaptive curriculum would not single out children who were different. In this they appeared to have been quite successful. The staff believe that their present structure improves student learning: "I think that the expectations for the first graders are higher."

The Candlelight primary team approached special education in a somewhat more traditional fashion. Specifically, they used more pull-out instruction and more formal consultation between regular and special education teachers. To a degree, school size--Candlelight is twice as large as City View--and resources have limited their options. Moreover, these generalizations understate the extent to which they were able to use the multi-age structure and efforts to individualize instruction both to create a more inclusive classroom environment and to focus effectively on the learning of special needs students. The quotation below offers one typical classroom strategy.

> I've done [grouping at] random because sometimes when you focus too much on skills, you have all the kids that are lower-skilled in one group. I don't feel like I can meet all their needs. When they're mixed, I have some kids that don't need me quite as often, and that makes it so I can go ahead and work a little bit more with kids that need more.

At the same time, most of the Candlelight teachers appreciate the support that special education students and others who may be slower learners receive in the pull-out resource room. In part they see the time, the attention, and the relative freedom from distraction as a plus for their students. In addition, because the special education teachers are trained in direct instruction; the program is different from what students receive in the regular classroom, and may be more appropriate for second and third graders who have reading difficulties. The potential tension between the two approaches appears to be muted by mutual respect, frequent formal meetings, and regular informal interaction and consultation. The following two comments provide good examples both of how the process works and of classroom teacher attitudes.

> So, when I find a kid who's, you know, just not being successful with any sounding out in 2nd or 3rd grade, one of the first things I do is drop them into a more intensive phonics program. . . And networking with resource room teachers to find ways that are, our special needs students are working in the same themes and doing things that are really tied to what our other students are doing in the classroom, when they are not in the classroom. So that when they come in, they still have a sense of what we're working on as a whole group, what we're learning about. And they feel like they're participating in the process.

> I like the way it is pulled out. . . They are put in [special education teacher]'s classroom and they are like boom-boom-boom and everything is real structured a lot of times they are using DISTAR or some type if direct instruction program.

The team's emphasis on grouping does not preclude attempts to be discerning about what each student actually needs. For example, in discussing one of her special education students, a Candlelight teacher focuses on an individual learning style

> He does not work well in a table grouping. He's seated with only one other student and not really at a table grouping, but more like a row. And I think he's only able to handle that kind of situation. It's too social and too distracting for him to be at a table. I tried it. You were here. And I'll try it again, but not for a while.

(4) Creating a culture of assessment

This section concentrate almost entirely on Candlelight. Over the four years of Project Departure, Candlelight teachers abandoned their acceptance of ad hoc, individualized tracking of student progress culminating in Grade 3 state test results. Despite staff initial resistance, joined by some of the school's instructional leaders, they made serious efforts to learn from a University-led but school district-sited, training program in curriculum-based measurement. Their expressed concerns focused on a cost-benefit calculus: systematic student assessment would require time-consuming data collection, data analysis, data interpretation, and they could not see how the added precision about primary pupil performance would pay off in better instruction or improved student learning. Possibly unexpressed was uneasiness and insecurity about making performance data too transparent and worry both about how well they were doing and how well administrators and parents would think they were doing. Candlelight had had a history of weak performances on state assessments, and had been subject to some criticism when annual results were printed in the local newspaper.

Training was school-wide, including intermediate as well as primary teachers, and took place over several half-day workshops during 1994. The training was hands-on, giving teachers a chance to collect and analyze data from their own students. For the primary block teachers, the process was ongoing, and included thrice yearly joint efforts to collect, aggregate, analyze and interpret student performance data in all four years of the school-university partnership.

Particularly important were assessments for reading. Specifically teachers designed assessment formats to measure oral reading fluency, prosody (expression), and comprehension. Using their own text and supplementary materials, the teachers selected easy, medium, and hard passages, reproducing exact text with word counts on scoring sheets which allowed students to read from their own books during the assessment. More significantly, teachers developed scoring guides, or rubrics, that allowed them to generate reliable indicators of student performance in prosody and comprehension. The process was consistent with procedures that have evolved within the field of curriculum-based measurement (Tindal and Marsten, 1990).

For some teachers, instead of taking more time, the systematization of assessment allowed them to become more efficient:

> I used to sit with each individual child and have them write out the letters of the alphabet and have them do sight-word, you know, read as many sight words as you can, but, you know, that the assessment is made like much easier, because I don't have to do that for all of the kids now, I can just take my little graph and I can just show them the sounds and letters that they need.

The teachers believed their new assessment skills facilitated recognition of student learning problems, setting off "red flags" and "alarm bells". One teacher stated that it allowed her to distinguish between "the skills we're really doing well [and those] we really need to bone up on." They developed confidence that the procedures were reliable:

> What's been really great about the assessments we've been doing, is ninety percent of the time the assessments we've been giving and the ones that the resource teacher has, they coordinate almost word for word--like okay he's reading X amount of words per minute and that's what she has too.

In addition to identifying specific individual problems, the data also gave teachers some idea of how their students differed, the range of abilities that existed within each classroom. This had implications for instruction: if something isn't working for a few or for many kids, teachers can make adaptations.

> We find out where the holes are in our teaching we can find out none of our kids know how to measure. We can go back and plan a measurement unit or specific individuals-oh, he didn't get this--a particular skill-- let's make sure . . . or if so and so can read fast but his prosody is just horrible then let's have a parent take him aside and work on it.

The ongoing, recursive assessments grounded Candlelight's developmentally appropriate strategy by allowing them to identify accurately how each student was performing. As New and Mallory (1994) suggest, teachers should not "[remain] dependent on others' prescriptions to inform their practice, particularly when their circumstances might allow them to co-construct new models of pedagogy to accommodate the challenges presented by the diversity of children in their classrooms" (p. 3). Bredekamp (1993), Odom and McLean (1993), and Slavin (1990) all testify to the effectiveness of tying instruction, and especially instructional adaptations, to continuous assessment. Documenting improvements is as important as finding problems, especially for students at risk. It is important to document incremental improvements as it is to find problems.

City View's approach differed greatly from Candlelight's. Because the primary team provided a broad range of curriculum and instruction for first and second grade reading, they relied heavily on screening and pre-assessment to make sure they matched students with particular learning needs with a program most appropriate for meeting those needs. To do this, they relied on pre-school "screeners" to create readings groups

in which children would have roughly comparable ability. In their early December retreat, they discussed children's placements to determine whether they should move to a faster or slower group. Their process was organized and seemingly reliable, although it was not nearly as systematic as at Candlelight. In addition to relying on individual judgments, they took advantage of shared ownership and knowledge of students: homeroom teachers, reading teachers, and often special educators had had the opportunity to work with most children. The schools small size, and the instructional structure that allowed for rotating of students and inclusion of special needs instructors into regular classroom activities allowed them to substitute community for more precise assessment. Instead, they put their energies into developing a complex report card, one that incorporated an somewhat untraditional set of indicators and included narrative comments, as a basis for more textured discussions with parents.

(5) Consultation, collaboration, community

We have suggested(Goldman and Tindal, 1996) that Candlelight's approach meets at least the minimum requirements for a "learning organization." The staff attempted to collect, organize, and then to use data that could be gathered efficiently, readily understood by colleagues, and intimately tied to learning, the building's major mission. City View looked more like a "learning community" as their efforts depended much more on proximity, affinity, and interaction. Staff in both schools engaged in "grounded learning."

> Grounded learning defines the process by which organizations learn. Like grounded theory, it describes the recursive relationship between a set of organized, disciplined practices and knowledge (theories) and everyday applied experience (data). Individuals move back-and-forth between the two until sense-making occurs, and continue to track because even sensible systems sooner or later stop making sense. (Goldman, Linden, & McCullum, 1997, p. 2)

Grounded learning requires both something to talk about and structures that facilitate communication. A sense of shared mission is also important. Both Candlelight and City View primary teams shared a strong commitment to the concept of developmentally appropriate practices in ways that included learners with special needs. Both developed structures that brought regular and special educators more closely together so that collectively they could serve their diverse students.

At Candlelight, assessment data became a common frame of reference for teachers. The shared language was around "how is this student doing?" and "how is my class doing?" The shared language also bridged some of the gap between regular educators who stressed whole language approaches to reading and the specialists who were trained in the phonics-based system of Direct Instruction. As McCullum and Tindal (1996) suggest that shared assessment ties together the IEP process from identification to plan writing to adaptation to measurement in ways that are integral to the DAP philosophy.

City View's shared primary culture and ability to collaborate was more situational, structural, and even demographic: a group of veteran teachers working together in a small school over a period of several years. Personal affinity and shared goals tended to supersede very different instructional styles. At the same time, the teachers structured their work to further collaboration: movement of students, adjacent classrooms, delivery of some special education into the flow of the regular classroom, monthly retreats.

In both schools, the need to develop a new two-year curriculum opened up the collaboration process so that teachers shared ideas and lesson plans as never before. This was especially true at Candlelight, although at City View special educators were more fully incorporated into the planning process. More significant, the new structures increased the frequency, and especially the effectiveness, of consultation between regular and special educators (McCullum & Tindal, 1996).

What didn't happen: Some interpretations

By teachers' standards, both primary multi-age programs were successful. Staff at both schools made substantial personal investments in new curricula. At Candlelight they made major, time consuming, changes in how they assessed student learning. At City View, teachers essentially extended their teaching day by 45 minutes without compensation, and moved from individual to collective ownership of primary pupils. Although student performance on state tests did not markedly improve, both schools made some gains in the outcomes for low performing children, and felt the new multi-age structure lead to behavioral gains. In both schools, student success answered the initial skepticism some parents had had about multi-age classrooms.

At the same time, intermediate programs essentially stayed the same. At City View, intermediate teachers expressed support in principal for multi-age classrooms, but weren't willing to make comparable investments. Effort by primary teachers to make seamless articulations of their students into third grade classrooms never got off the ground, despite invitations to have third grade teachers join the primary retreats. At Candlelight, training in curriculum based measurement was school-wide, but implementation was most complete in the grade 2-3 block. Shared involvement in the national consortium lead to greater cross-grade collaboration, but not to the same level of synergy in either planning or in regular-special education exchange.

As we observed the schools over time, the issue of how to take improved practices "to scale" kept coming to our attention. Several factors seem to have combined to keep the innovations at the primary level. First, and probably most important, were the dynamics of community itself. Primary teachers put forth enormous collective efforts. These became self-referential and mutually reinforcing as the pace of change required enormous interdependence. While the desire to link regular and special education more closely was the initial impetus, the new multi-age structure encouraged collaboration. The more the primary teachers worked together, the less intense interaction they had with intermediate colleagues. In short, they created a powerful

subculture which had the effect of segregating them from other teachers. This is not unlike what we see in many secondary-level academic departments (Siskin, 1994).

A second, related, factor was the impact of the primary-level changes on school resource allocation. The structural integrity of the primary program gave the teachers a great deal of self-confidence and seems to have helped them argue effectively for more resources for their classrooms. Special education teacher and aide time were especially important. In addition, the collaborative process at City View and the assessment training at Candlelight threw regular and special education teachers together, increasing their ability and desire to communicate frequently with one another. Professional jealousy may also have played a role, especially at City View. There, the primary teachers were able to drive the master schedule and to sell their colleagues on the early-bird/late-bird school day. The primary program got more recognition, and because of the University partnership, more free training consulting and more paid release time.

A third factor may have been the perception (or even the reality) that primary and intermediate students are fundamentally different. Hence, strategies appropriate for the early grades--developmentally appropriate practices, multi-age classrooms, inclusion--might not be desirable or effective for fourth or fifth graders. The major "job" of primary children is to acculturate to school life, and to learn basic reading and math skills. Classrooms are not competitive, and assessment is low stakes (although most states now have standardized third grade tests), and the influence of high school or university standards is very distant (Wells & Oakes, 1996). There are other differences: more acceptance of student performance variance (especially for boys) and less resistance to retention in grade, lower student/teacher ratios (and considerable recent support for legislative mandates to extend this practice), and a preference for delaying identification of mild to moderate disabilities until the end of grade 2. At intermediate levels, content mastery--literature, social studies, science--becomes an increasingly important element of the curriculum. Self-selection of teachers with elementary certificates into either primary or intermediate grades may also play a role. Implications of these differences for school structuring have not really been researched, although reformers appear to be more sanguine about post-primary restructuring than the teachers in Candlelight or City View.

A final factor was the stance of building and district administration towards the primary teachers' investment in developmentally appropriate practices. In both schools, teachers felt the principals did exactly what they wanted him to do: provide encouragement, some resources, and political cover--exactly what Murphy, Louis, and colleagues suggested in Reshaping the Principalship (1994). At Candlelight, the principal facilitated the Wednesday early release by entering a partnership with a local "latchkey" provider to create the school's first after school program. He protected the afternoon planning session by not scheduling staff meetings on Wednesdays. District administrators backed the program, making clear that their support was conditional on the school not losing ground on state third and fifth grade assessments. The district team reinforced their positive stance to the project by entering into a series of additional school-university partnerships in curriculum-based assessment, school-discipline, and teacher training.

At City View, the principal supported the unusual early start schedule and helped primary teachers lobby their intermediate colleagues to get the latter's sign-off. In addition, he was willing to make teaching assignments--the K-2 multi-age blocks in 1995-96 and 1997-98--that would keep the team intact as the school lost student numbers. He had had some concerns that teachers' efforts to balance developmentally appropriate practices with Direct Instruction would result in burn-out. However, like the Candlelight principal, he only loosely monitored the primary program, making clear his confidence in the teachers' skills and professionalism. The laissez-faire approach of both principals allowed the multi-age program to flourish, while at the same time making it difficult to integrate its benefits with the intermediate program. Candlelight was a bit more successful; their primary culture was looser and less mutually interdependent, assessment issues became school wide concerns, and participation in a national restructuring network forced the staff to engage in more building-wide planning and coordination.

The literature on organizational cultures in schools, as well as in corporations and government agencies, suggests the power of shared understandings and expectations reinforced over time (Cunningham and Gresso, 1993; Deal and Kennedy, 1984; Ott, 1989; Rossman and Firestone, 1988). As teachers at both schools struggled together with the new curricular demands of the multi-age classroom, the primary education culture became stronger, more entrenched, and more self-consciously distinctive from that of the rest of the school. As the specialists, especially at City View, became integral parts of the primary subculture, their function as communicators and integrators between primary and intermediate teachers diminished. The principals' respect for the effort and accomplishment of the primary teams made it seem unnecessary for them to intervene in ways that might increase articulation between the two teams.

Organizational cultures frequently operate below the surface. In schools, shared goals, shared experiences, and shared challenges strengthen the culture. When turnover is low--and this was unusually true at City View--the school culture develops its own momentum. Moreover, explicit visions that articulate and highlight the key aspects of the culture can, when shared, generate commitment and attachment to the school. Collective efforts to turn the rhetoric into reality at both Candlelight and City View also increase investment and turn individuals inward. The idea of creating a "school community," to use the term described by Sergiovanni (1994) and researched by Louis, Kruse, and Associates (1995) among others, had the same effect, although the sense of community at City View incorporated children and parents as well as primary teachers and specialists but didn't really extend to the entire school to nearly the same extent. Candlelight's participation in the national restructuring consortium and the schoolwide workshops on curriculum based measurement encouraged development of a more broadly based school culture and community.

To some degree, the schools' inability to take the primary teachers' paradigm shift "to scale" is a reflection of powerful societal norms about the nature of school, about what Metz (1990) calls "real school" and Louis and Kruse (1995) call "schoolness." As children progress through school, demands and expectations for <u>both</u> children <u>and</u> teachers increase. What is OK for first or second graders may not be OK for fourth

graders and is definitely not for sixth graders. Grade level differences, and especially differences between, elementary and secondary schools or junior and senior highs, are real, that is to say that they are institutional phenomena that in most societies have lasted several generations. Much of the public, and many educators, explain and make virtues of age grade distinctions (Hughes, 1939). By establishing such a sharp contrast between primary and intermediate programs, the two schools made relatively soft distinctions between elementary grades a bit firmer. The differences between City View's Grade 1-2 and K-2 and Candlelight's Grade 2-3 blocks are instructive. At the former the primary teachers "captured" almost the entire student entry process; at the latter, for historical rather than philosophical reasons, the multi-age block broke up student experiences. This may have been one of the reasons why student transitions and teacher connectedness between the multi-age block and later grades was smoother at Candlelight.

The experiences of Candlelight and City View also direct us to the issue of how loosely, or tightly, schools are or might be. In the mid-1970s, Karl Weick introduced organizational scholars to the concept of "loose coupling," that is the disposition of some organizations to function effectively even when parts (sub-units or individuals) seem to be moving in different, incompatible directions. His first paper applied the construct to universities; later he suggested that it worked for schools as well (Weick, 1976, 1982). Researchers in educational administration (Fennell, 1994; Firestone and Wilson 1985; Herriott and Firestone 1984; Logan 1993; Willower 1982) have elaborated on loose coupling in K-12 schools.

These and other scholars have argued that schools are only loosely held together by rules (state regulations and district policies which often can be circumvented), by external accountability, and by educators' shared values. In contrast, the general theme of loose coupling theory and research suggests that most instructional activities are not interdependent and that teacher isolation in classrooms does not foretell their effectiveness. Moreover, centralization of decision-making--Weber's monocratic authority--is as likely to stifle as to promote instructional efficacy. More broadly, the institutionalization of teacher individualism and autonomy has contributed to some of the frustrations reformers and administrators have had in translating state mandates into substantive changes at the building level (Conley and Goldman, 1997; Fuhrman, 1993; McLaughlin, 1991). However, recent movements to increase state (as opposed to local) control over education as state government increases its funding proportion and the imposition of both standards-based assessments and publicly reported state testing have begun to make individual teachers and schools more aware that educational accountability can be more precise; correspondingly, teachers have more stake in their colleagues effectiveness and more interest in becoming more tightly coupled.

What does this have to do with City View and Candlelight? At City View, the primary multi-age block created a much more tightly coupled system than the teachers had previously experienced. The schedule, the way they divided reading instruction, and the pull-in special education created interdependencies. The system wasn't entirely rigid as there was room for different approaches to reading and for one colleague to participate fractionally in the structure they developed. However systemic that

structure appeared, it was also very dependent on frequent face-to-face interaction and hence may have been limited to the number of very busy teachers who could work together. Intermediate teachers were only loosely coupled to one another and to their primary colleagues. At Candlelight, teachers appeared to be collaborative rather than interdependent, yet they exhibited much more personal variance in how they approached instruction. However, their evolving ability to refine assessment of student learning created the as yet unrealized possibility that student progress might become the school's coupling mechanism.

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